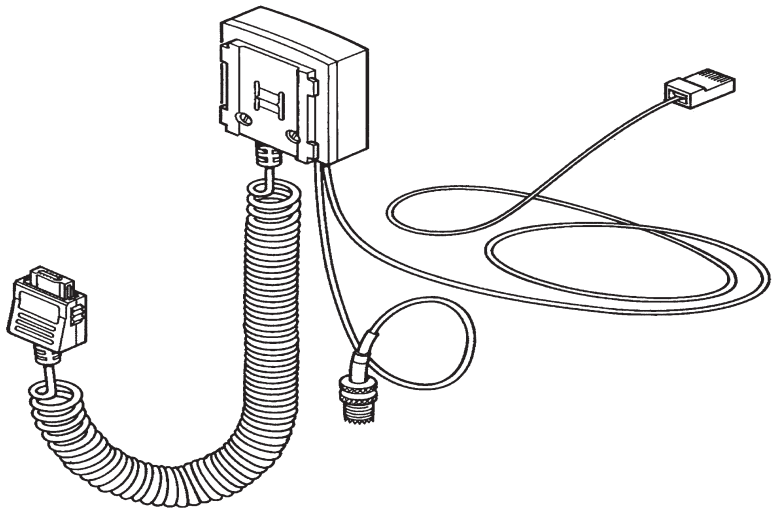
After Sales Technical Documentation

CABLE JUNCTION BOX JBH–1



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CABLE JUNCTION BOX JBH–1

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Introduction

The JBH–1 Cable Junction Box has been designed for use specifically with the MBH–9 In–car Holder (to which it interfaces) and the existing Fixed Car Kit (based on the HFJ–2 Handsfree Junction Box)

The JBH–1 enables the signals from the Coax Coil Cord, which plugs into the Phone, to be split into audio and RF for connection to the HFJ–2 Handsfree Junction Box (via the SCE–2 Front Mount Cable if the Booster is fitted) and the Vehicle Antenna (via the XRH–1 RF extension Cable if the Booster is fitted).

The JBH–1 Cable Junction Box enables the phone to access all the normal features of the existing HFJ–2 Handsfree Junction Box, with the exception of an External Audio Handset which is NOT specified for use with this phone.

Technical Summary

The JBH–1 Cable Junction Box is a passive device and therefore connects directly between the phone and HFJ–2/SCE–2 and the Vehicle Antenna/XRH–1. However, there is a PCB (DC8) contained within the Accessory Connector upon which there is mounted a Reed Switch and a zero Ohm resistor to act as a link, since the same DCX2 PCB is used in another application. The Reed Switch is “pulled” by a Magnet located in the MBH–9 In–car Holder; its function is to signal to the phone whether it is located in the holder or not. If the phone is located in the holder then it will operate in “Handsfree” mode, if not then it will operate in “Handset” mode. The Reed Switch is of the “Normally Open” type ie. it is closed by the MBH–9 magnet.

List of Modules

Name of Module	Type Code	Material Code	Notes
Cable Junction Box	JBH–1	0630008	Complete Assembled Unit
Connector PCB Module	DC8	0200377	Fits inside accessory connector
HFJ Cable + Connectors	4C22080	7100422	NMP Cable used on MCH–3
Assembly Parts	MJBH1	0260336	

Technical Specifications

Modes of Operation

Phone Located Inside MBH–9 Holder

Phone operates in “Handsfree” mode and connected to external antenna.

Phone is charged by HFJ–2 through JBH–1.

Phone Located Outside MBH–9 Holder

Phone operates in “Handset” mode and connected to external antenna.

Phone is charged by HFJ–2 through JBH–1.

Extreme Conditions

Storage Temperature:–	–40°C + 85°C
Operating Temperature:–	–30°C + 60°C
Absolute Maximum Current/pin:–	1 A

Maximum Ratings

Maximum Voltage at any pin to ground:–	50 V dc

Control Signals

Refer to **External Signals and Connections** section.

AC Characteristics

Not applicable since JBH–1 is a passive unit.

External Signals and Connections

A list of connectors is shown in the following table.

Connector Name	Code	Notes	Specifications/ Ratings
HFJ–2 Connector	Connector A	8 Pole	
Phone Connector (see X001)	X001	10 Pole– mounted on DC8 Module PCB	
RF signal from phone to Vehicle/Booster antenna	Coax Coil Cord Mini RF Connector	2 Pole	

HFJ Cable + Connector (Connector A)

Signal Name	Pin/Con	Notes
XEXAUD/TXI	1	Booster Control. Active Low
DGND/PGND	2	Ground for Charger
M2BUS	3	Serial MBUS data between phone, accessories and HFJ–2
VC	4	Supply Voltage/ charging current for phone
HOOK	5	Handset Hook Indication
AGND/SGND	6	Audio Ground
XMIC/HFJCONN	7	Audio signal from HFJ–2, input to phone
XEAR/HFJPWR	8	Audio signal from phone to HFJ–2

Phone Connector X001

Signal Name	Pin/Con	Notes
VC	1	Supply Voltage/charging current for phone
XEAUD	2	RF Booster PWM Control
HOOK	3	Indicates to the phone whether in or out of MBH–9 In–car holder. Line will be ”Low” when phone is inside MBH–9, ”High” when out.
XEAR/HFJPWR	4	Audio signal from phone to HFJ–2.
DGND	5	Digital Ground
VC	6	Supply Voltage/charging current for phone
M2BUS	7	MBUS data between the phone, Accessories and HFJ–2.
AGND	8	Audio Ground
XMIC/HFJCONN	9	Audio signal from HFJ–2, input to phone.
DGND	10	Digital Ground

Coax Coil Cord Mini RF Connector

Signal Name	Pin/Conn	Notes
RF Conductor	Centre Pin	RF Signal from phone to external Antenna
RF Ground	Shield	RF Signal Ground Connection

Mechanical Characteristics

Unit	Dimensions (mm) (WxHxD)	Weight (g)	Cable Length (metres)	Material/ Colour
JBH–1	49x22x54	150	Antenna:0.30 ± 0.015 Audio: 1.45 ± 0.05	JBH–1 Housings: CYCOLOY C 1000HF–96127 Colour: Warm Black

Functional Description

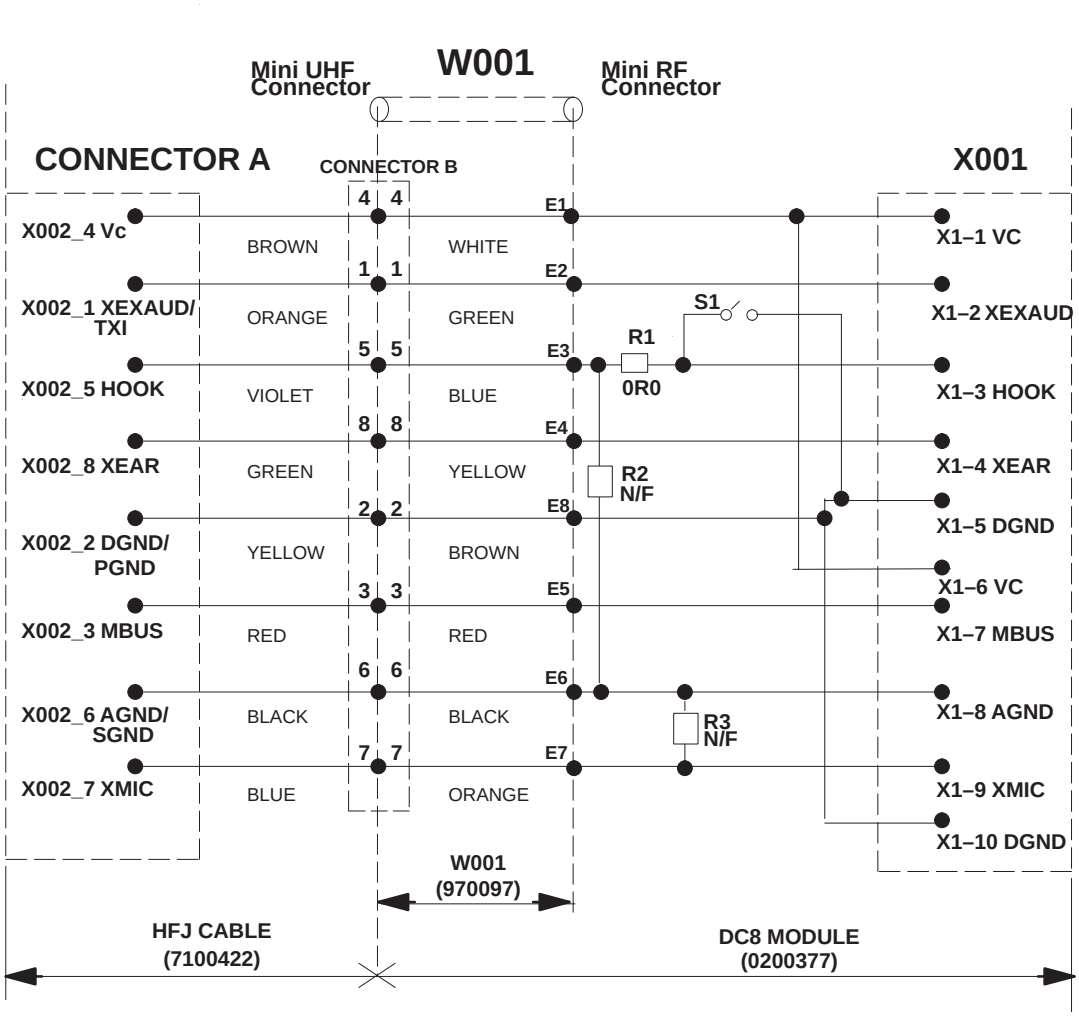
The DC8 PCB Module, located inside the accessory connector, contains a Reed Switch, to signal to the phone whether or not it is located in the MBH–9 In–Car Holder; a connector (X001) which plugs into the bottom of the phone; and a zero Ohm resistor which acts as a link, since the DC8 PCB (DCX2) is used in another application.

The RF signal from the phone to the External Antenna or Booster is achieved using a direct connection between the X001 Connector and the mini UHF connector via the Coax Coil Cord. The mini UHF Connector mates with the External Antenna Connector or the Booster XRH–1 Cable.

Schematic

The top–level schematic for JBH–1 is shown overleaf.

Figure 1: Schematic



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